BookletChart™

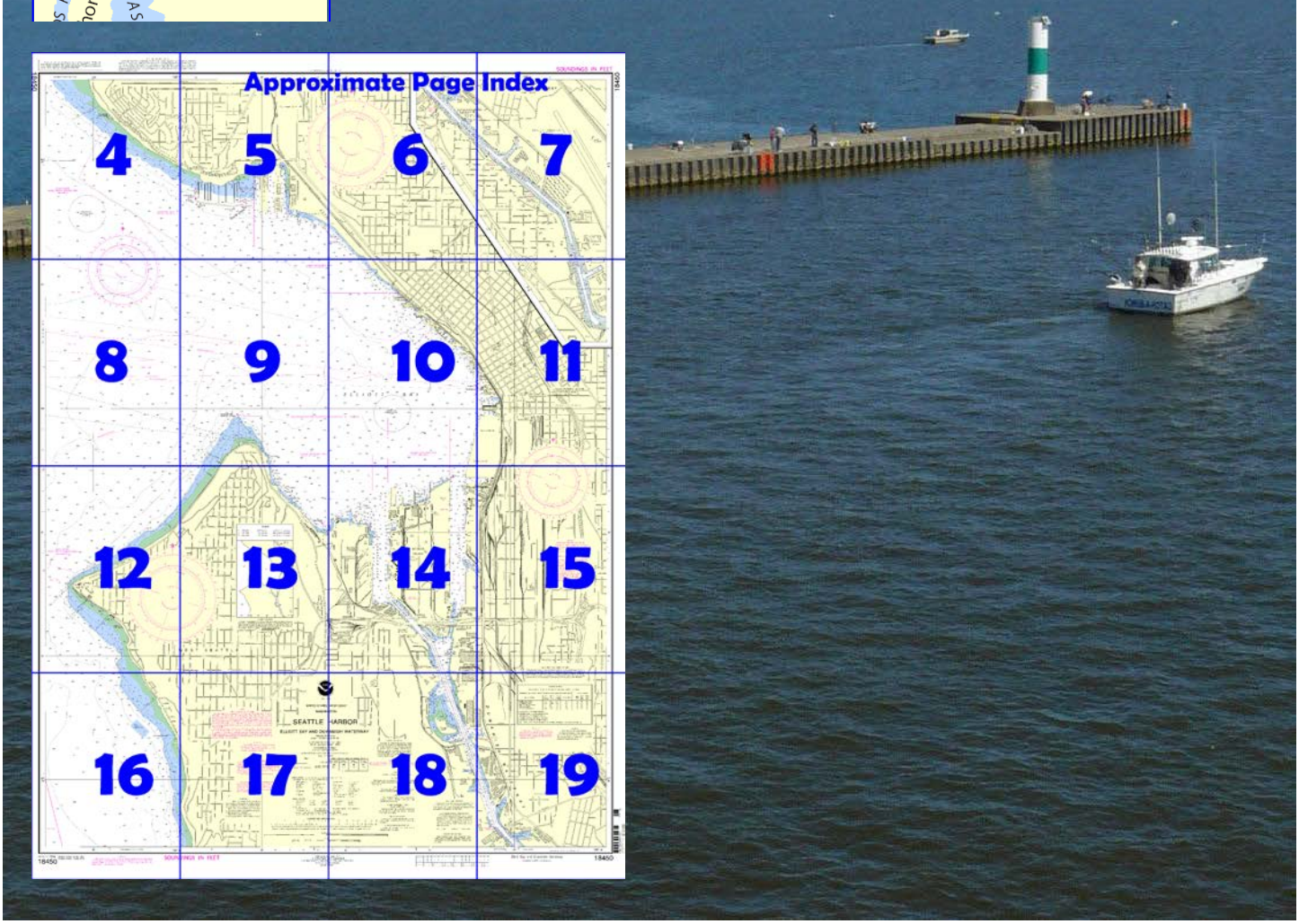
Seattle Harbor – Elliott Bay and Duwamish Waterway

NOAA Chart 18450

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

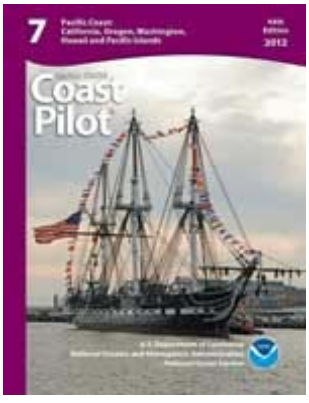
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18450.

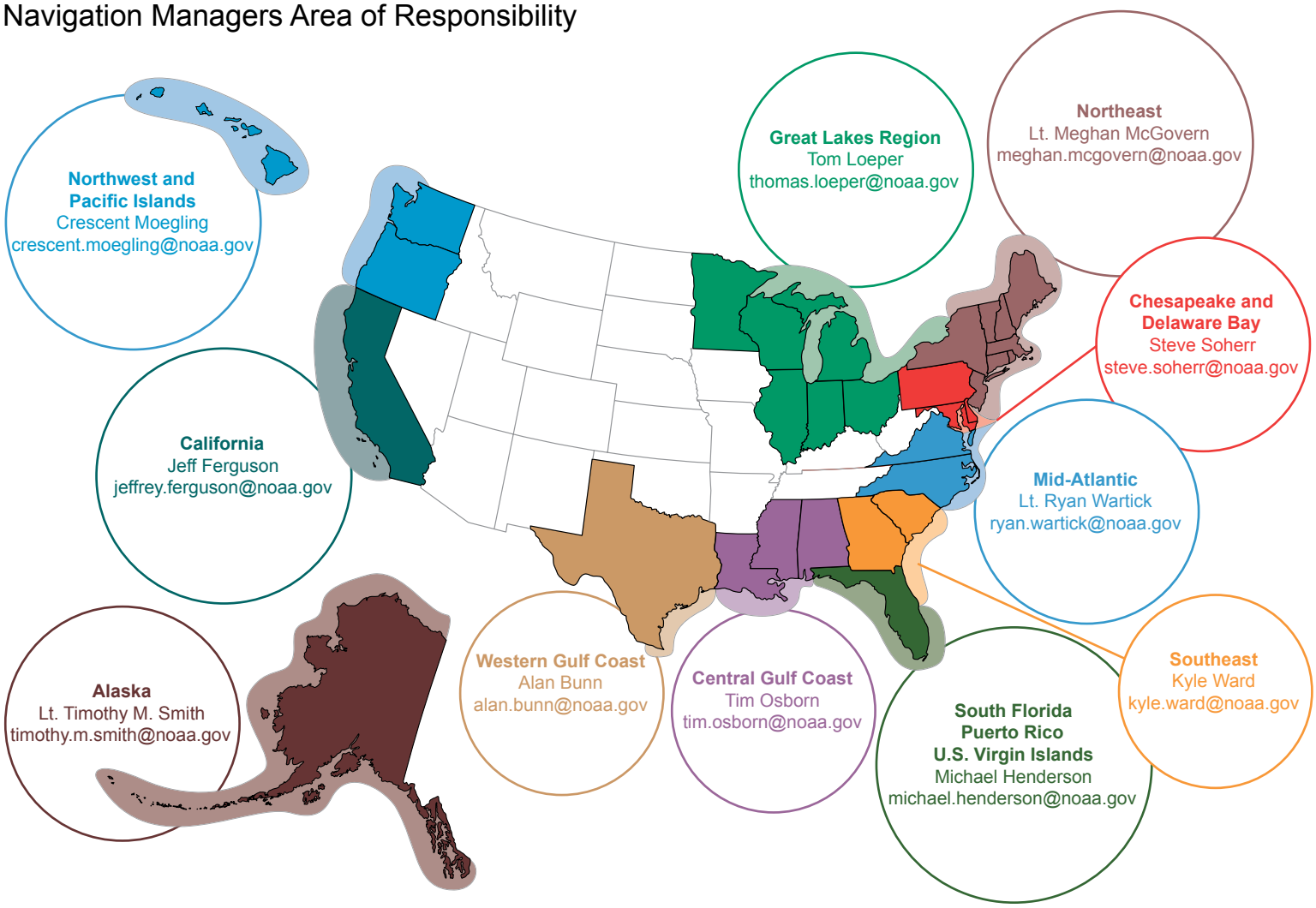


(Selected Excerpts from Coast Pilot)
Seattle extends from Everett, the city to its N, almost to Tacoma, the major city to the S, and E beyond the limits of Lake Washington and its shores. Seattle has many modern, fully equipped ocean terminals, excellent transportation facilities, several large shipyards, and numerous large marine supply houses.
Much of Seattle's shipping is in the Pacific Rim trade, and the city is a major industrial center. Seattle handles most of the waterborne commerce to Alaska Ports, and is the terminus of several shipping lines operating to Alaska as well as other parts of the world. Almost 22 per cent of Seattle's commerce is in the foreign trade, with British Columbia, Japan, Asia, and Europe forming the cornerstone of the overseas commerce.
The **Port of Seattle** includes an outer and inner harbor. The outer saltwater harbor includes Elliott Bay; East, West, and Duwamish Waterways; Shilshole Bay, and the portions of Puget Sound adjacent to Ballard on the N and West Seattle to the S of the entrance of Elliott Bay. Seattle's freshwater inner harbor consists of Lakes Union and Washington, which are connected with each other and with Puget Sound by the Lake Washington Ship Canal. Most of the waterfront facilities of the inner harbor are privately owned.
Of the nearly 60 piers and terminals in the outer harbor, the Port of Seattle owns more than 25, operating three and leasing out the others. These properties include 10 general cargo handling facilities and 1 major container handling terminal. The port also has four fully developed marine terminals, and a fifth in the construction phase, on the Duwamish Waterway S of Harbor Island in the Lower Duwamish Development District, a project which provides lease-sites for terminal facilities and water-oriented industries. The Port of Seattle also operates Seattle-Tacoma International Airport, which is located about midway between Seattle and Tacoma.
The **Marine Exchange of Puget Sound**, located in Seattle, has a Vessel Monitoring/Vessel Reporting service which tracks the arrival of a vessel from a time prior to arrival at the pilot station to a berth at one of the Puget Sound ports. Constant updates of the ship's position and estimated time of arrival are maintained through a variety of sources. This information is available to and is passed to the vessel's agents and to other interested activities. These services continue until the vessel passes the pilot station on her outbound voyage.
Other services offered by the Marine Exchange include a daily newsletter about future marine traffic in the Puget Sound area, communication services, and a variety of coordinative and statistical information. The office monitors VHF-FM channels 20 for Grays Harbor traffic, 9 for Strait of Juan de Fuca traffic to Protection Island, and 20 for Puget Sound traffic from Protection Island, 24 hours a day.
Vessel Traffic Service Puget Sound, operated by the U.S. Coast Guard, has been established in the waters of the Strait of Juan de Fuca, Rosario Strait, Admiralty Inlet, Puget Sound, and the navigable waters adjacent to these areas. (See **161.1 through 161.155,** chapter 2, for regulations, and the beginning of chapter 12 for additional information.)
Regulated navigation area.-Due to heavy vessel concentrations, the waters of the Strait of Juan de Fuca, the San Juan Islands, the Strait of Georgia, and Puget Sound, and all adjacent waters, are a regulated navigation area. (See **165.1 through 165.13 and 165.1301**, chapter 2, for regulations.)
Floating logs and **deadheads** or **sinkers** may be encountered anywhere in Puget Sound; caution should be exercised.
Coast Guard.-A **marine safety office** and a **vessel documentation office** are located in the Federal Building in downtown Seattle. (See Appendix A for addresses.) The Coast Guard moors vessels at the Pier 36 Slip (47°35'24"N., 122°20'31"W.).
Harbor regulations are enforced by the Harbor Patrol Unit of the Seattle Police Department. The unit has two patrol boats to aid in the enforcement of the city ordinance prohibiting unlawful destruction by excessive speeds, disorderly behavior, or unsafe seamanship.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Seattle	Commander 13th CG District Seattle, WA	(206) 220-7001

Navigation Managers Area of Responsibility

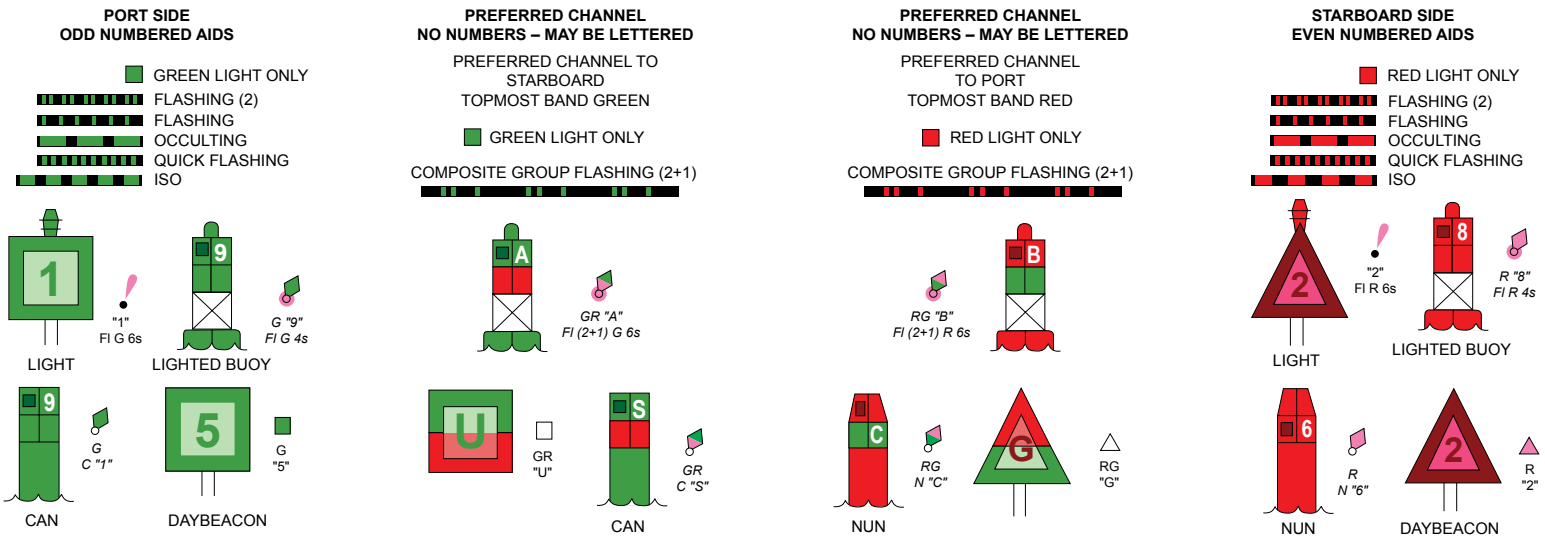


NOAA's navigation managers serve as ambassadors to the maritime community. They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit *nauticalcharts.noaa.gov/service/navmanagers*

To make suggestions or ask questions online, go to *nauticalcharts.noaa.gov/inquiry*.
To report a chart discrepancy, please use *ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx*.

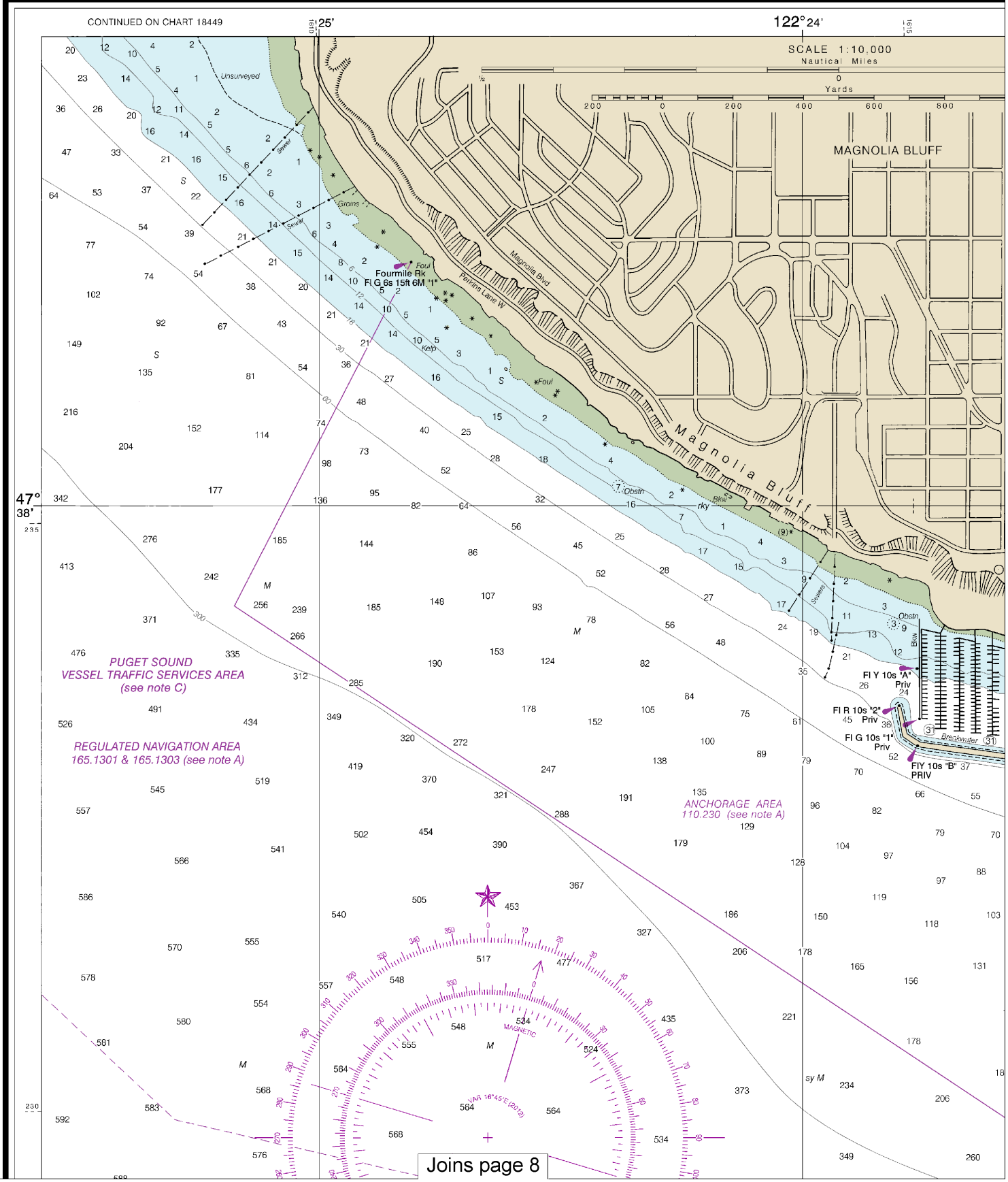
Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at *http://www.navcen.uscg.gov*

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.



Joins page 8

4

Note: Chart grid lines are aligned with true north.

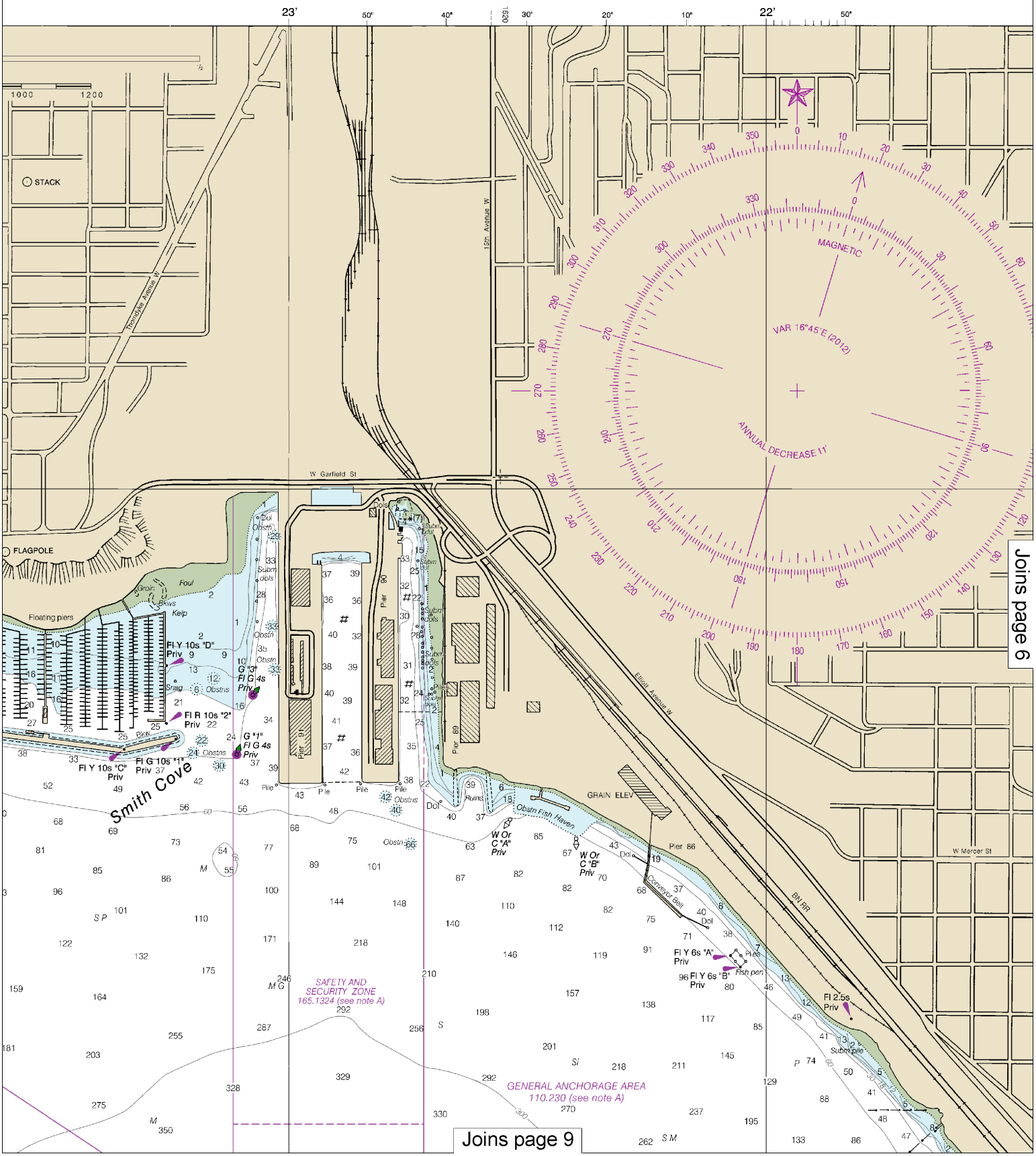
Printed at reduced scale. ~~SCALE 1:10,000~~ See Note on page 5.

Nautical Miles

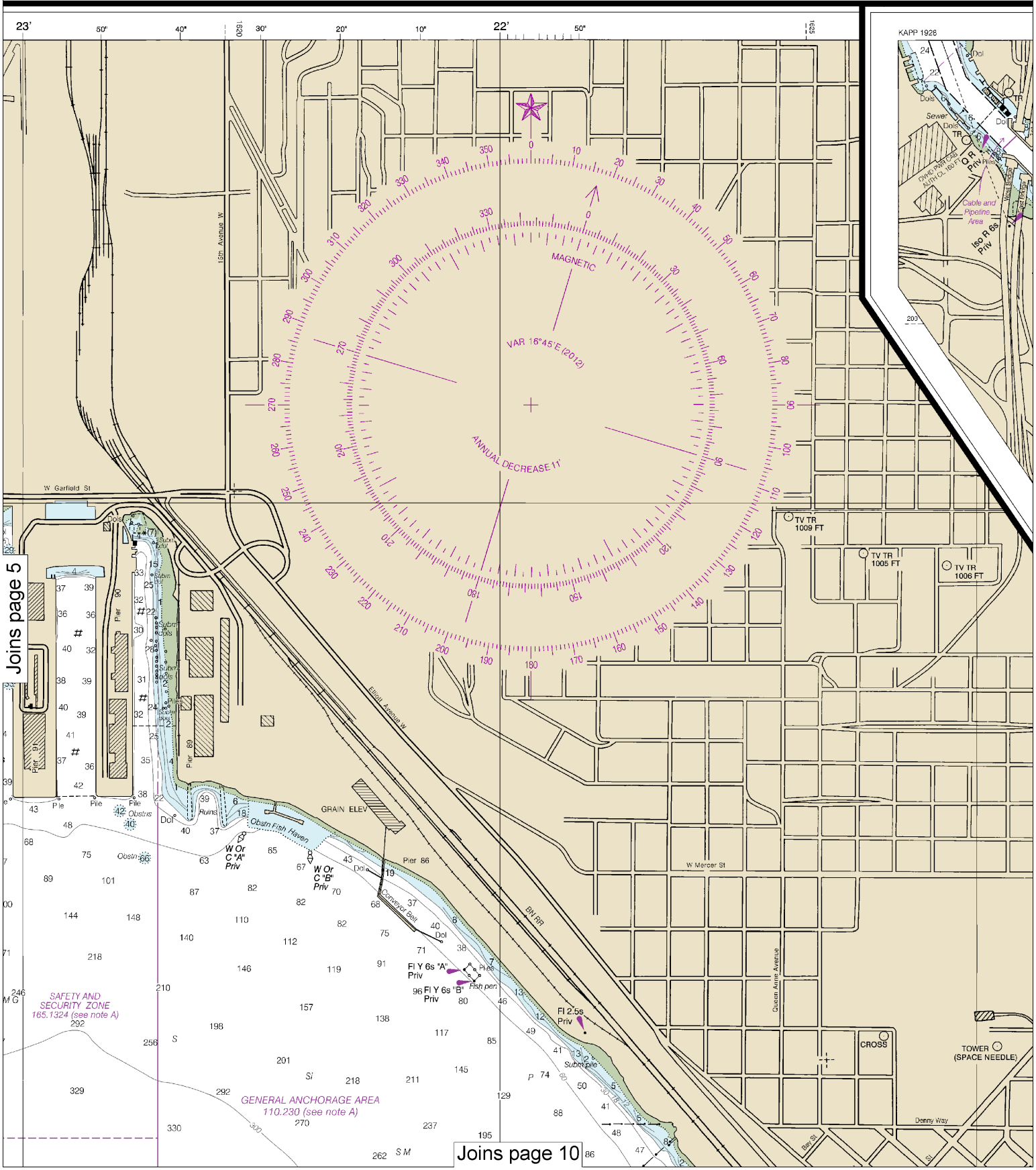
0

Yards

200 0 200 400 600 800 1000 1200



This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:13333. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.



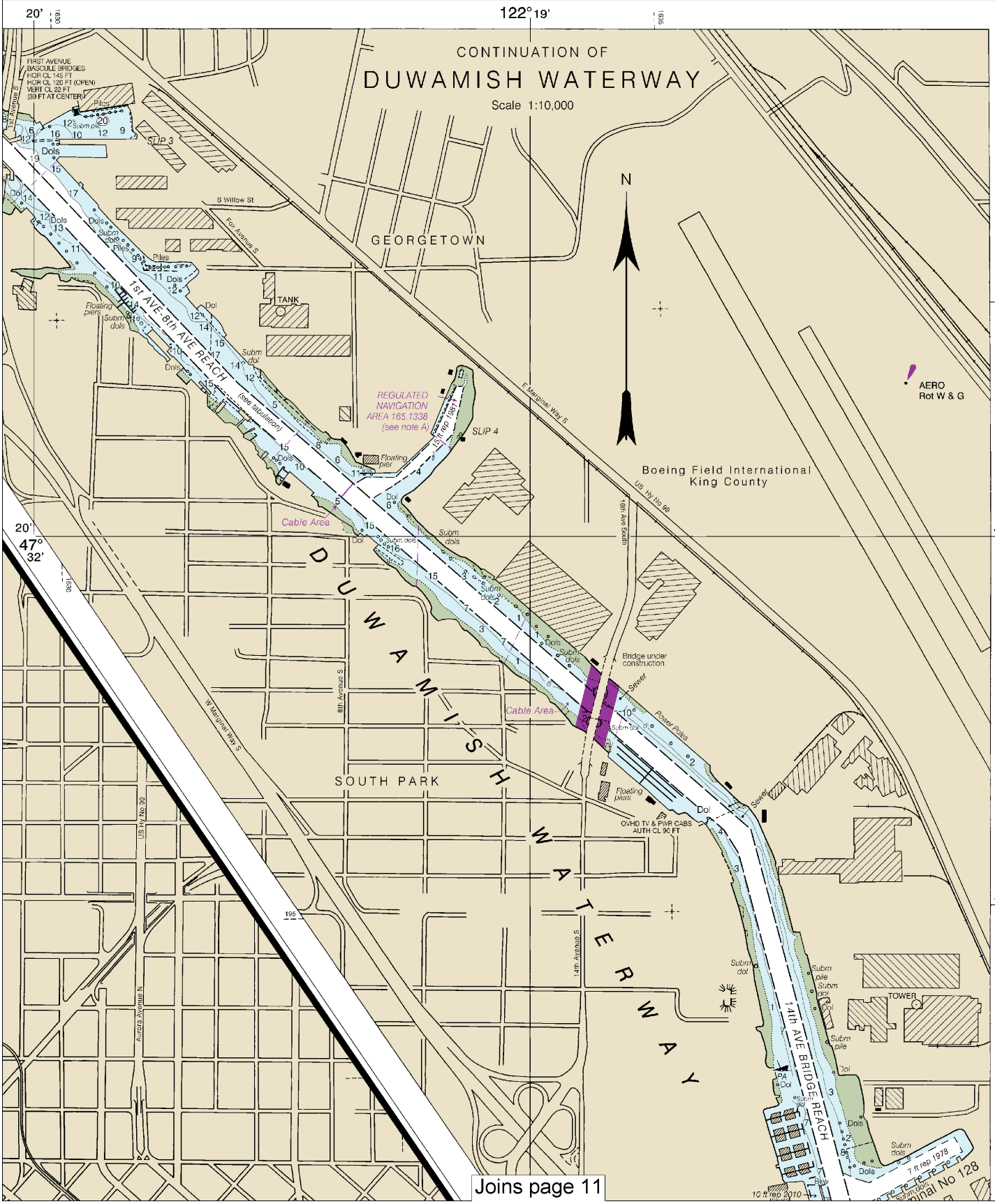
6

Note: Chart grid lines are aligned with true north.

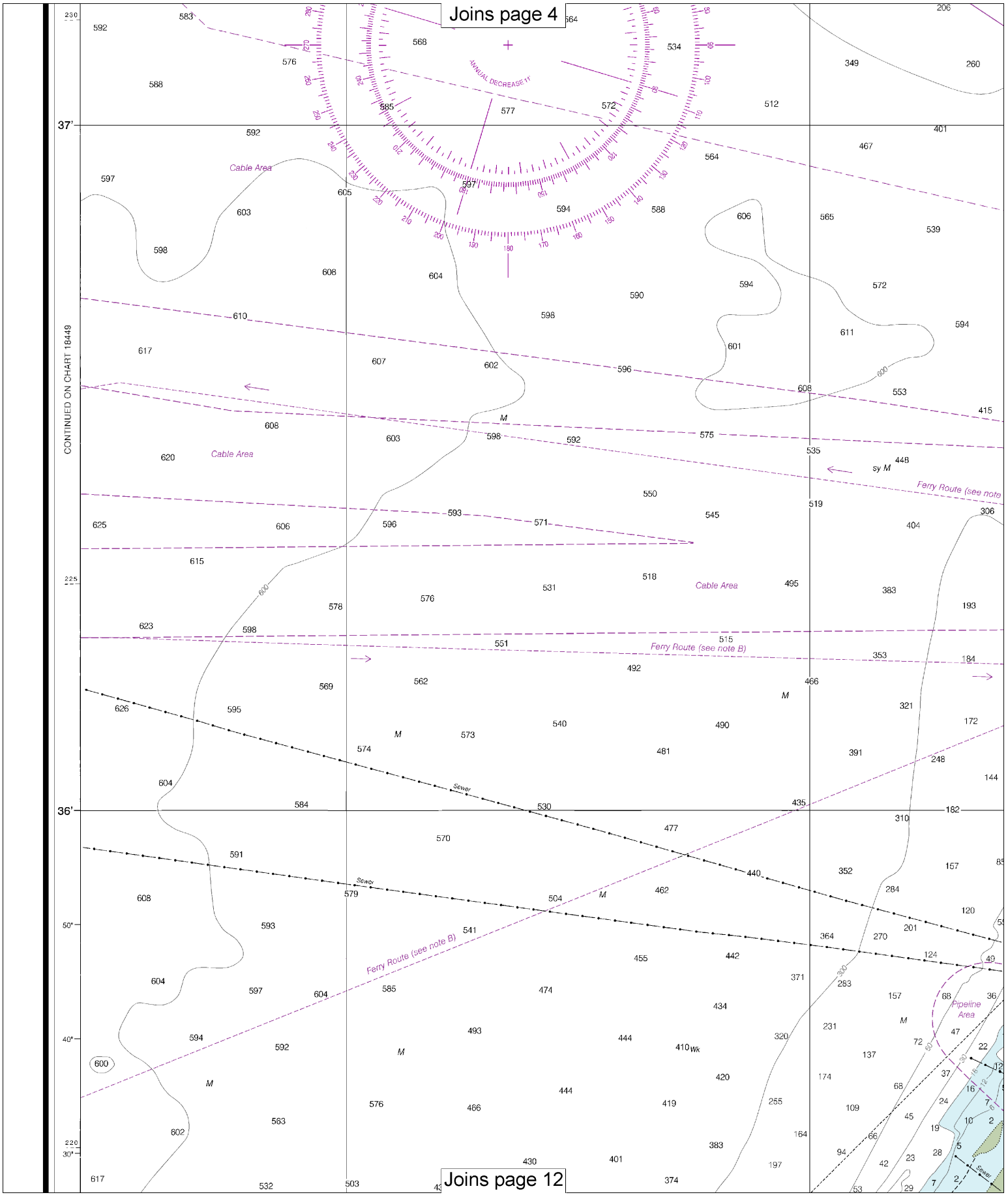
Printed at reduced scale. ~~SCALE 1:10,000~~ See Note on page 5.

Nautical Miles
0

Yards
200 0 200 400 600 800 1000 1200



nauticalcharts.noaa.gov
19th Ed., Nov. 2012. Last Correction: 9/9/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016), CHS: 1116 (11/25/2016)



8

Note: Chart grid lines are aligned with true north.

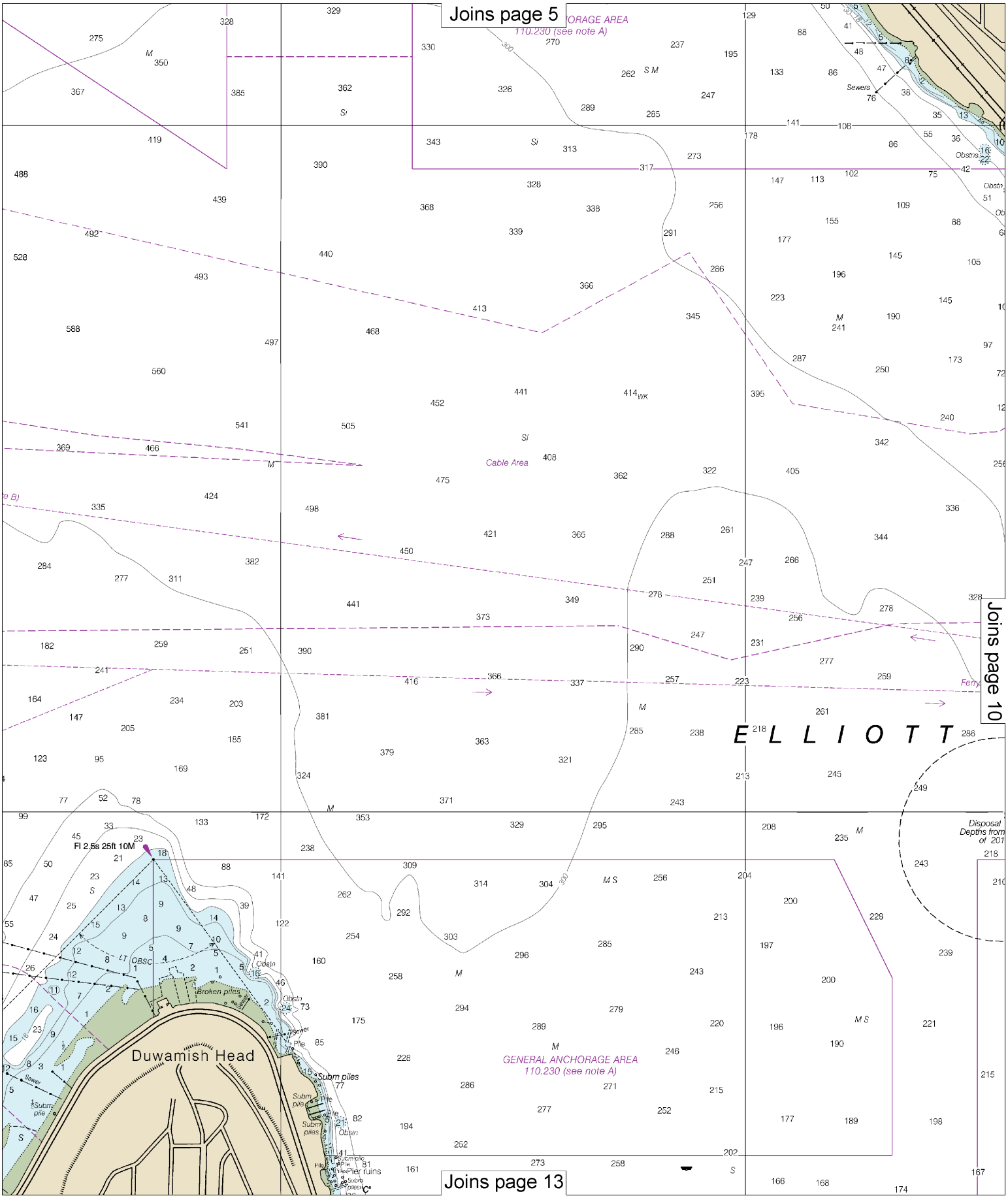
Printed at reduced scale. ~~SCALE 1:10,000~~ See Note on page 5.

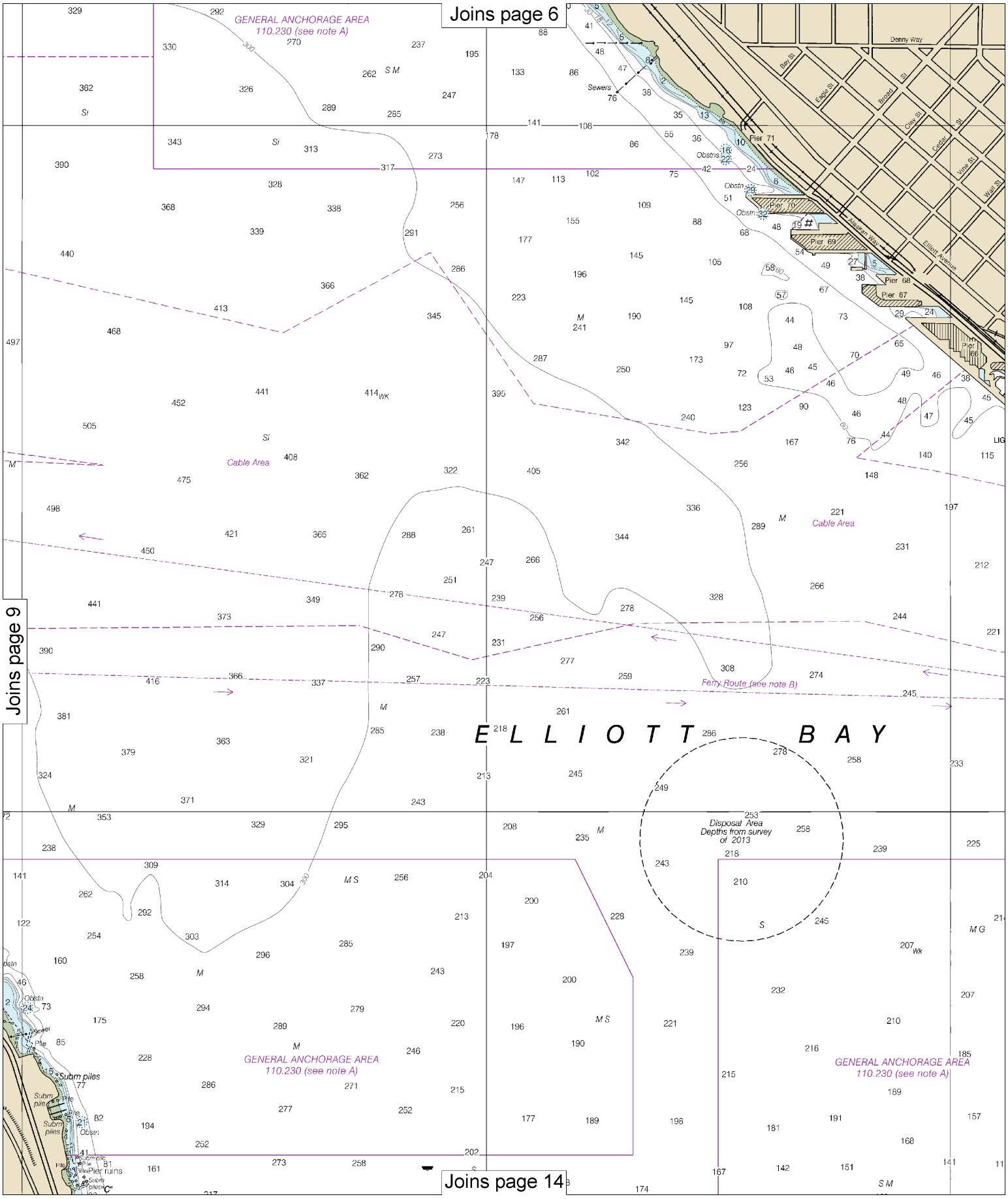
Nautical Miles

0

Yards

200 0 200 400 600 800 1000 1200


Joins page 5
GENERAL ANCHORAGE AREA
110.230 (see note A)
Cable Area
E L L I O T T
Fl 2.5s 25ft 10M
Duwamish Head
Broken piles
Subm piles
Pier ruins
GENERAL ANCHORAGE AREA
110.230 (see note A)
Joins page 10
Joins page 13



10

Note: Chart grid lines are aligned with true north.

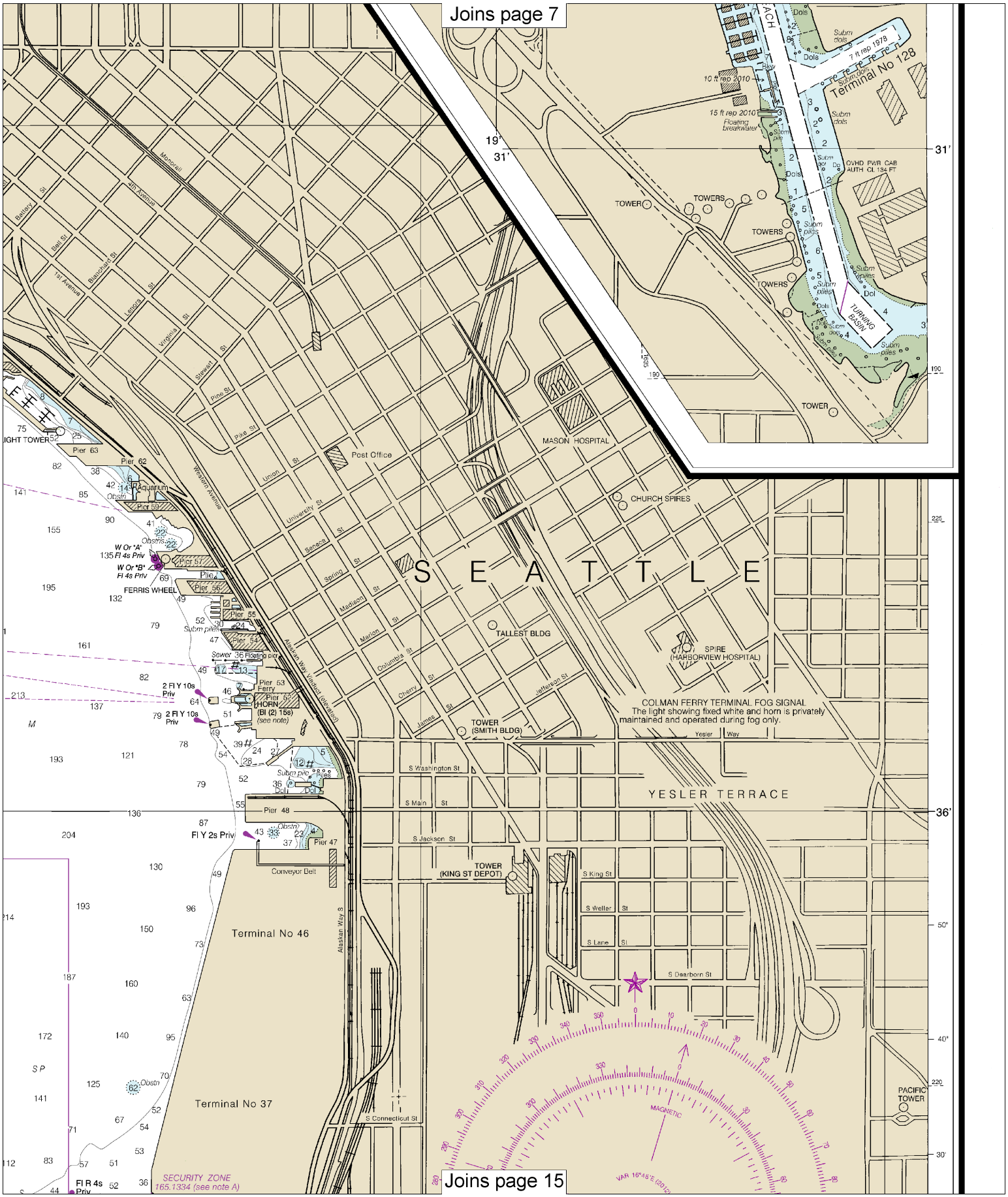
Printed at reduced scale. ~~SCALE 1:10,000~~ See Note on page 5.

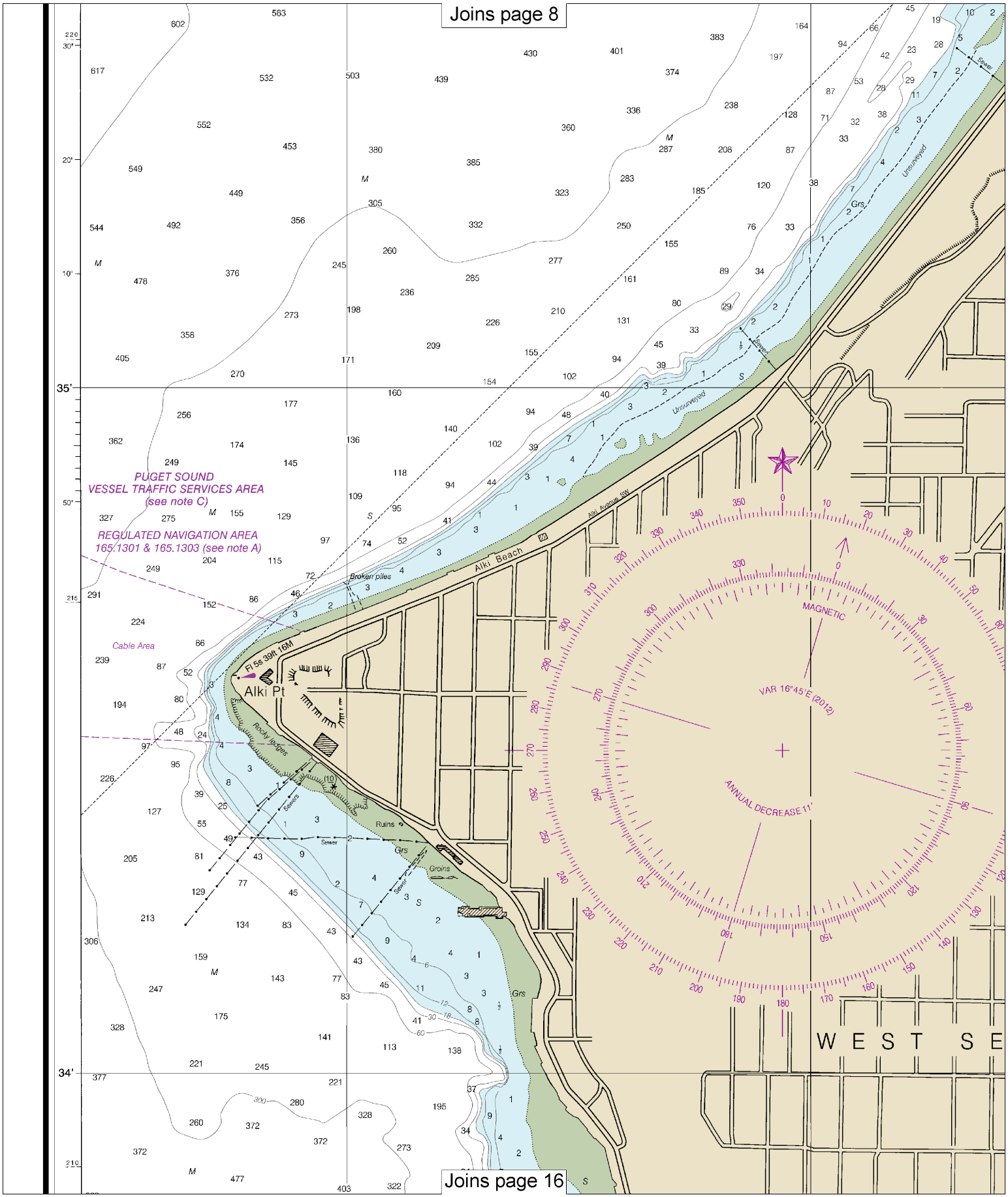
Nautical Miles

0

Yards

200 0 200 400 600 800 1000 1200


Joins page 7
Terminal No 128
Floating breakwater
TURNING BASIN
TOWER
TOWERS
OVHD PWR CAB AUTH CL 134 FT
MASON HOSPITAL
Post Office
CHURCH SPIRES
S E A T T L E
TALLEST BLDG
SPIRE (HARBORVIEW HOSPITAL)
COLMAN FERRY TERMINAL FOG SIGNAL
The light showing fixed white and horn is privately maintained and operated during fog only.
TOWER (SMITH BLDG)
YESLER TERRACE
TOWER (KING ST DEPOT)
PACIFIC TOWER
Pier 63
Pier 62
Aquarium
Pier 59
Pier 57
Pier 56
FERRIS WHEEL
Pier 55
Pier 54
Pier 53 Ferry
Pier 52
(HORN (Bl (2) 15s) (see note)
Pier 48
Pier 47
Conveyor Belt
Terminal No 46
Terminal No 37
2 Fl Y 10s Priv
Fl Y 2s Priv
Fl R 4s Priv
SECURITY ZONE 165.1334 (see note A)
Joins page 15
MAGNETIC
VAR 16°48'E (2012)



12

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:10,000~~

Nautical Miles

0

Yards

200 0 200 400 600 800 1000 1200

See Note on page 5.

Joins page 9

Joins page 14

Joins page 17

REGULATED NAVIGATION AREA
165.1336 (see note A)

WEST WATERWAY

Terminal No 5

Pier 2

Pier 3

Pier 4

Pier 7

Harbor Avenue SW

Fairmount Ave SW

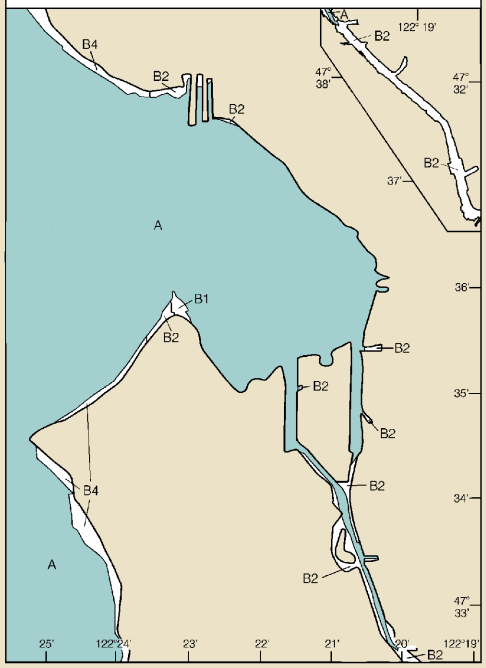
26th Avenue SW

Iowa Avenue SW

SW Spokane St

SOURCE

A	1990-2013	NOS Surveys	full bottom coverage
B1	1990-2001	NOS Surveys	partial bottom coverage
B2	1970-1989	NOS Surveys	partial bottom coverage
B4	1900-1939	NOS Surveys	partial bottom coverage

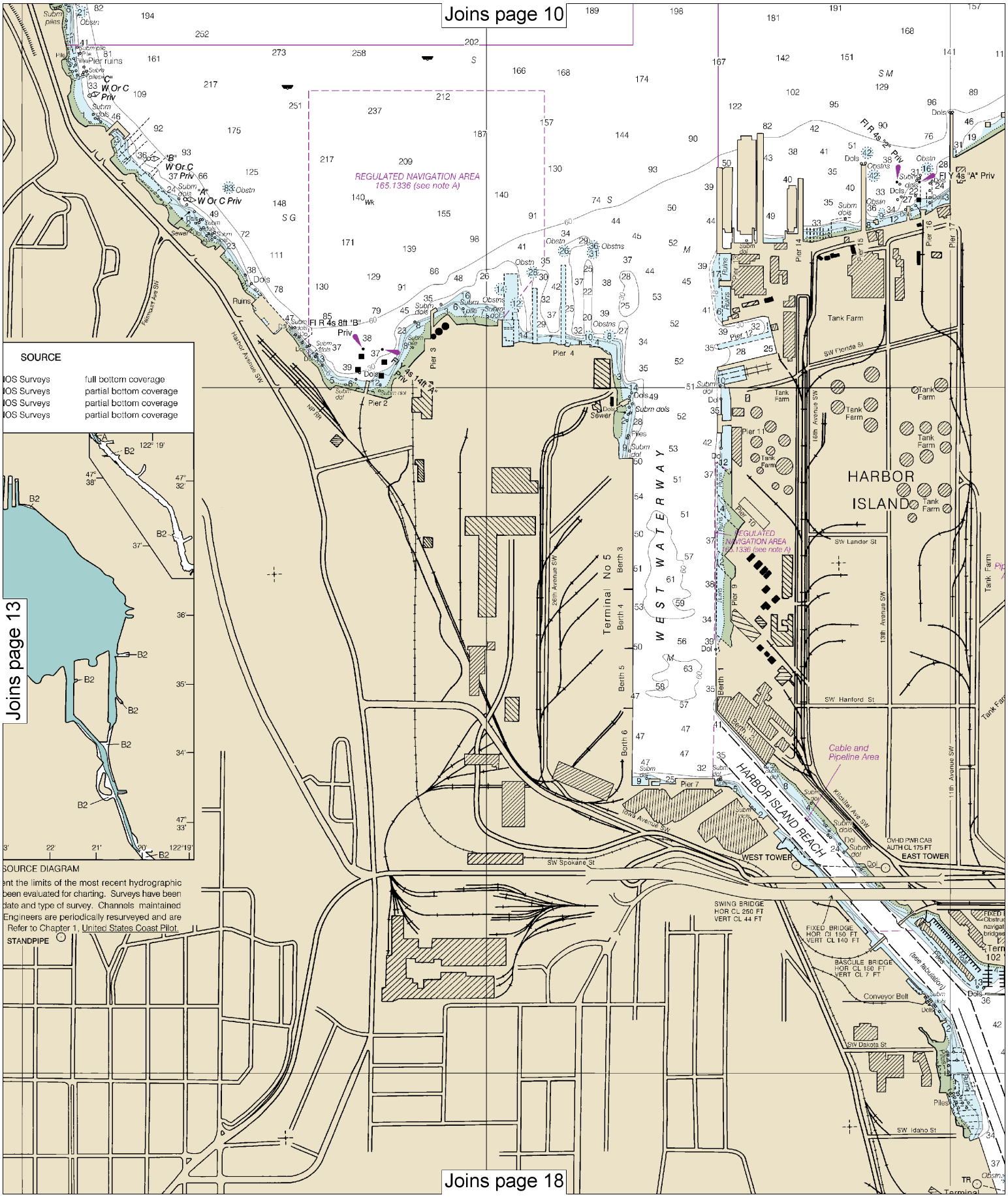


SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

STANDPIPE

E A T T L E



14

Note: Chart grid lines are aligned with true north.

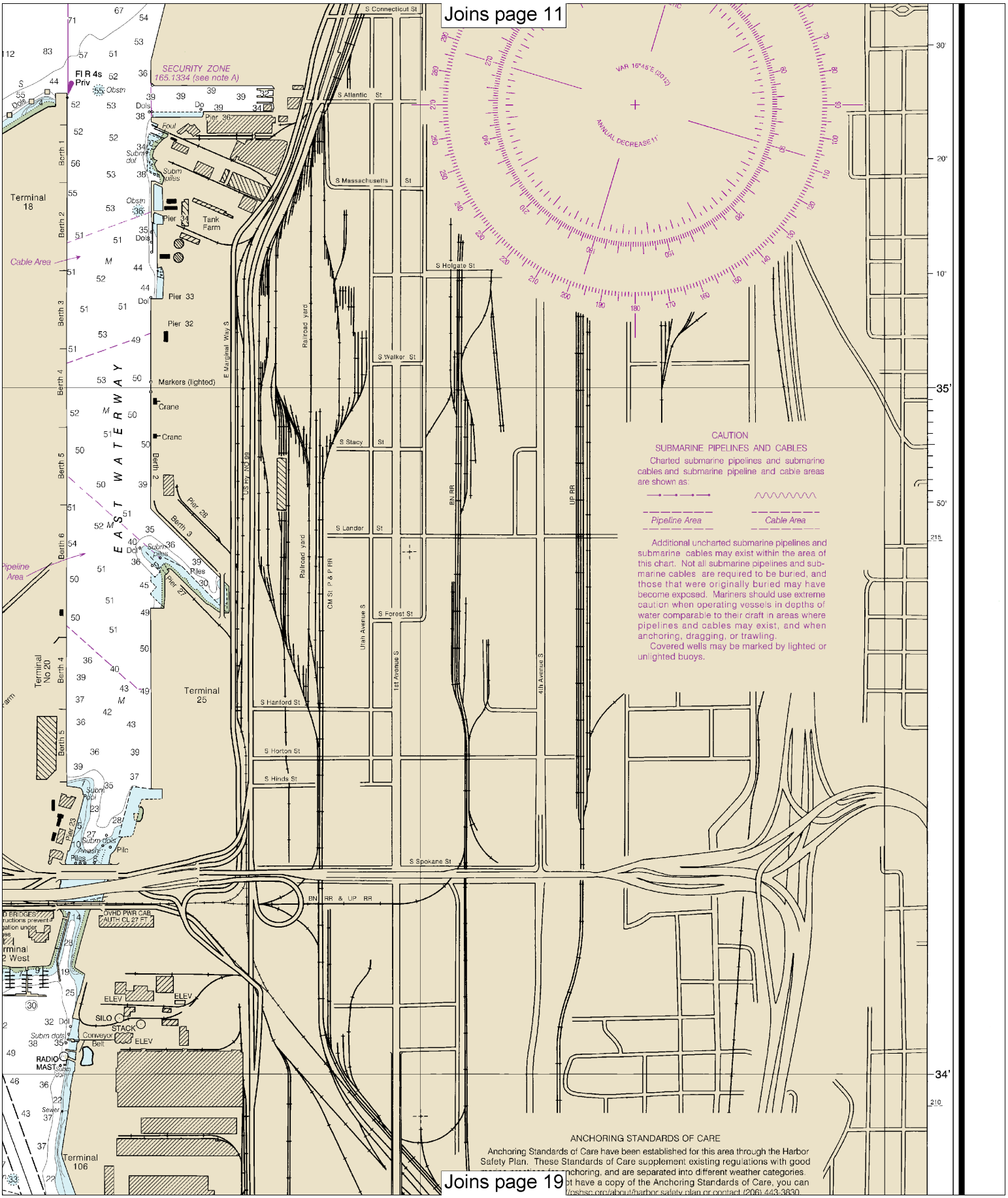
Printed at reduced scale. ~~SCALE 1:10,000~~ See Note on page 5.

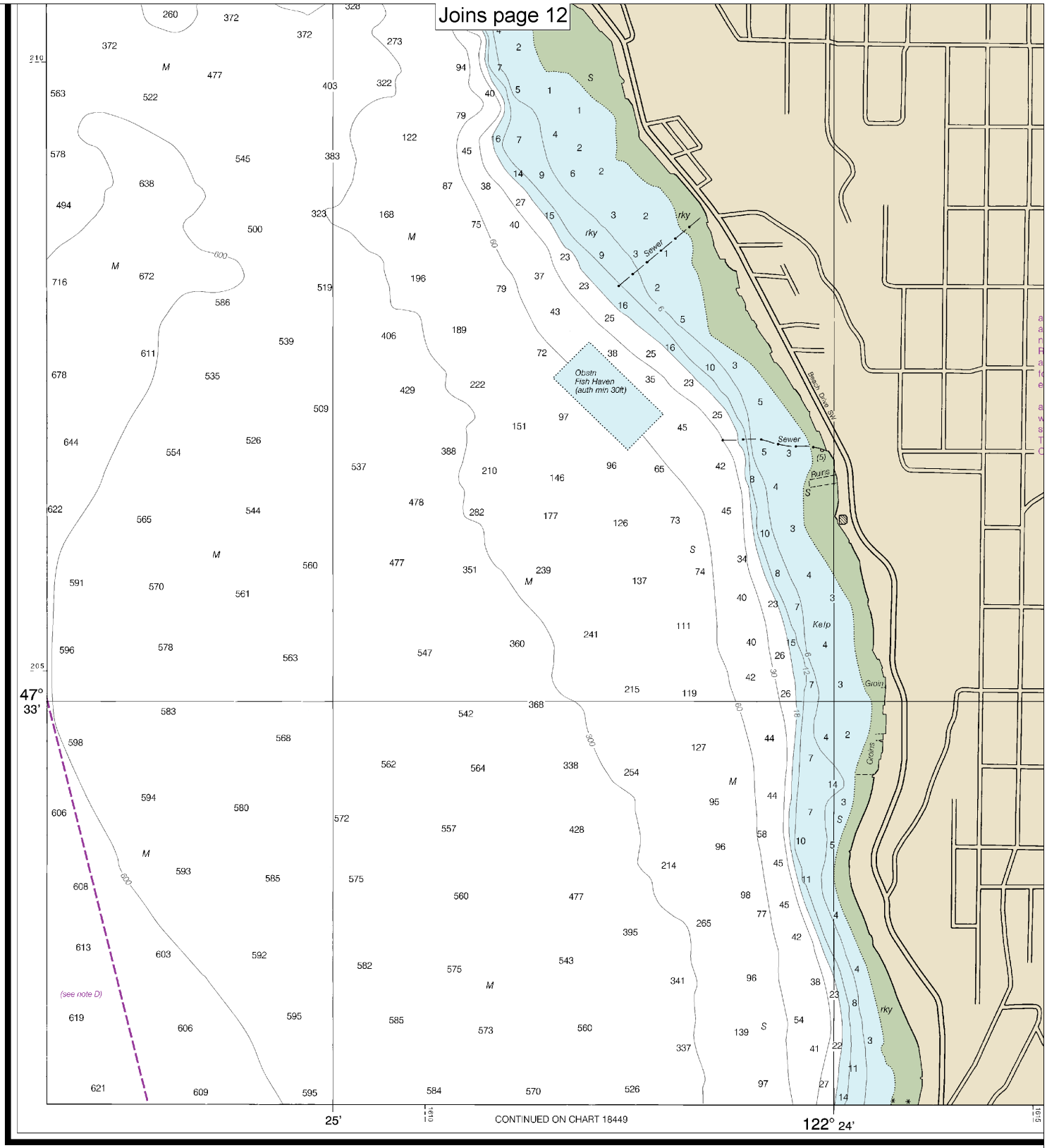
Nautical Miles

0

Yards

200 0 200 400 600 800 1000 1200


Joins page 11
SECURITY ZONE
165.1334 (see note A)
Fl R 4s
Priv
Obstn
Pier 36
Foul
Subm dol
Subm piles
Terminal 18
Berth 1
Berth 2
Berth 3
Berth 4
Berth 5
Berth 6
Pier 34
Tank Farm
Cable Area
Pier 33
Pier 32
Markers (lighted)
Crane
Crane
EAST WATERWAY
Pipeline Area
Pier 28
Berth 2
Berth 3
Pier 27
Subm piles
Piles
Terminal No 20
Terminal 25
Berth 4
Berth 5
Subm Pipl
Pier 23
Subm dols
Piles
Pile
Awash
OVHD PWR CAB
AUTH CL 27 FT
Terminal 2 West
ELEV
ELEV
SILO
STACK
Conveyor Belt
ELEV
RADIO MAST
Sewer
Terminal 106
S Connecticut St
S Atlantic St
S Massachusetts St
S Holgate St
S Walker St
S Stacy St
S Lander St
S Forest St
S Hanford St
S Horton St
S Hinds St
S Spokane St
E Marginal Way S
Railroad yard
Railroad yard
CS Fy No 88
CM St P & P RR
Utah Avenue S
1st Avenue S
4th Avenue S
BN RR
UP RR
BN RR & UP RR
VAR 16°45'E (2016)
ANNUAL DECREASE 11'
CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:
Pipeline Area
Cable Area
Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.
Covered wells may be marked by lighted or unlighted buoys.
ANCHORING STANDARDS OF CARE
Anchoring Standards of Care have been established for this area through the Harbor Safety Plan. These Standards of Care supplement existing regulations with good
nchoring, and are separated into different weather categories.
t have a copy of the Anchoring Standards of Care, you can
/pshsc.org/about/harbor-safety-plan or contact (206) 443-3630
Joins page 19
30'
20'
10'
35'
50'
34'
215
210



18450

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

SOUNDINGS IN FE

19th Ed., Nov. 2012. Last Correction: 9/9/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016), CHS: 1116 (11/25/2016)

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:10,000~~

Nautical Miles
0
Yards
200 0 200 400 600 800 1000 1200

See Note on page 5.

Joins page 13

THE NATION'S CHARTMAKER SINCE 1807

R TR
(KUUU)
1590 kHz
(DAY ONLY)

UNITED STATES - WEST COAST

WASHINGTON

SEATTLE HARBOR

ELLIOTT BAY AND DUWAMISH WATERWAY

Mercator Projection
Scale 1:10,000 at Lat 47° 35'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov.

NOTE D

TRAFFIC SEPARATION SCHEME

One-way traffic lanes overprinted on this chart are RECOMMENDED for use by all vessels traveling between the points involved. They have been designated to aid in the prevention of collisions in the Puget Sound waters, but are not intended in any way to supersede or alter the applicable Rules of the Road. Separation zones are intended to separate inbound and outbound traffic and to be free of ship traffic. Separation Zones should not be used except for crossing purposes. When crossing traffic lanes and separation zones, use extreme caution.

Precautionary Areas have been established where major lanes merge and cross the traffic separation scheme. It is recommended that vessels proceed with caution in these areas. Wherever practical, vessels entering or leaving the system should do so at these precautionary areas. For more information regarding Traffic Separation Scheme procedures and regulations, see 33 CFR 167 and / or Chapter 2 of the U.S. Coast Pilot.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington or at the Office of the District Engineer, Corps of Engineers in Seattle, Washington.

Refer to charted regulation section numbers.

NOTE C

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the Puget Sound area. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User's Manual. The entire area of the chart falls within the Vessel Traffic Services (VTS) system.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙(Accurate location) ○(Approximate location)

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Duwamish Waterway, Eighth Ave South	(47°32'N/122°19'W)	11.1	10.2	2.7
Seattle	(47°36'N/122°20'W)	11.4	10.5	2.8

Dashes (- - -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov.

(Sep 2012)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

(21) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.

(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

SCALE 1:10,000

Nautical Miles

½ 0 ½

Yards

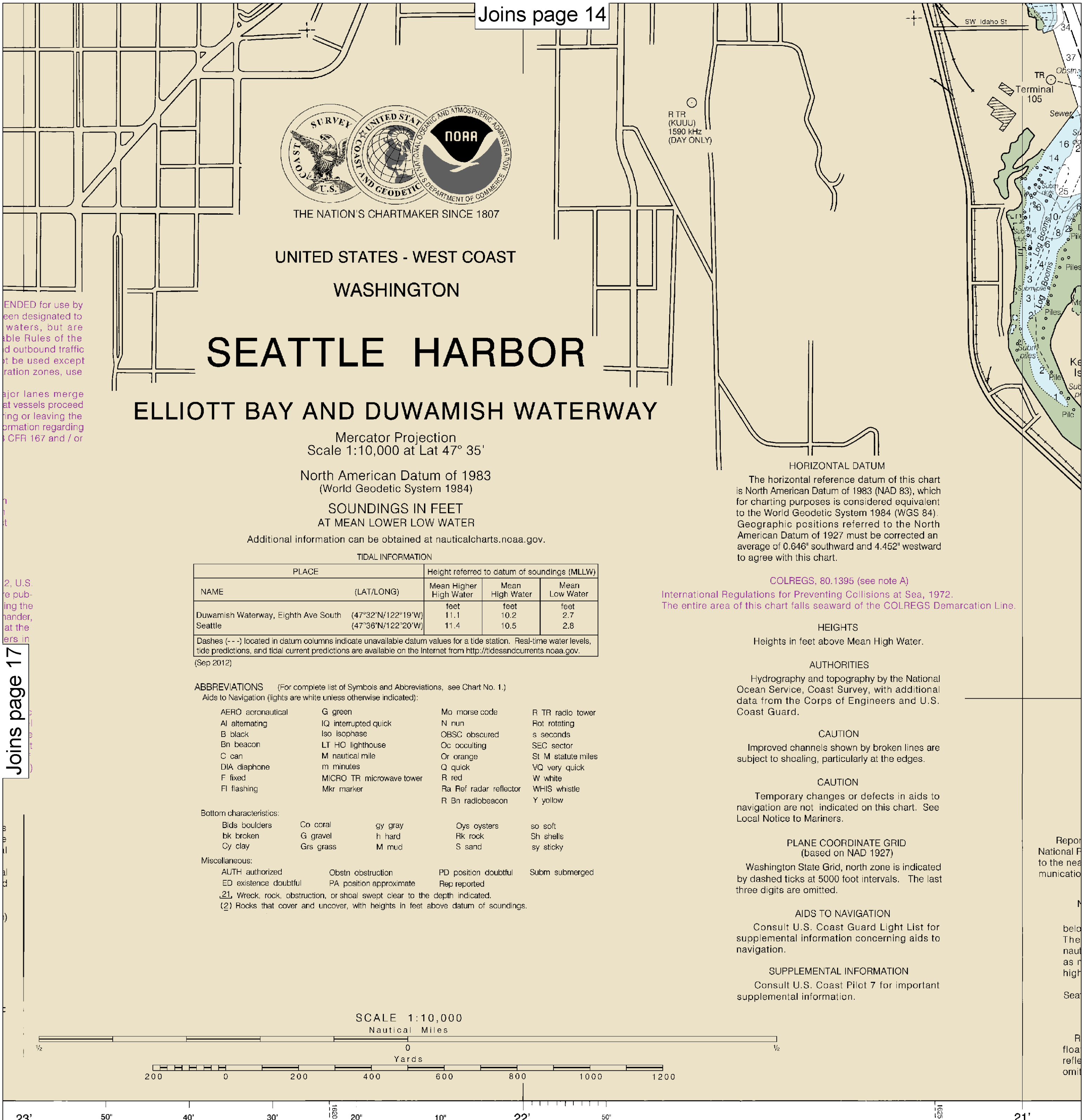
200 0 200 400 600 800 1000 1200

1615 23' 50" 40' 30' 1620 20" 10" 22' 50"

Joins page 18

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

Joins page 14



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - WEST COAST

WASHINGTON

SEATTLE HARBOR

ELLIOTT BAY AND DUWAMISH WATERWAY

Mercator Projection
Scale 1:10,000 at Lat 47° 35'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov.

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Duwamish Waterway, Eighth Ave South	(47°32'N/122°19'W)	11.1	10.2	2.7
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(Sep 2012)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.646" southward and 4.452" westward to agree with this chart.

COLREGS, 80.1395 (see note A)
International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers and U.S. Coast Guard.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

PLANE COORDINATE GRID
(based on NAD 1927)

Washington State Grid, north zone is indicated by dashed ticks at 5000 foot intervals. The last three digits are omitted.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

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SCALE 1:10,000
Nautical Miles
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Yards
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Joins page 17

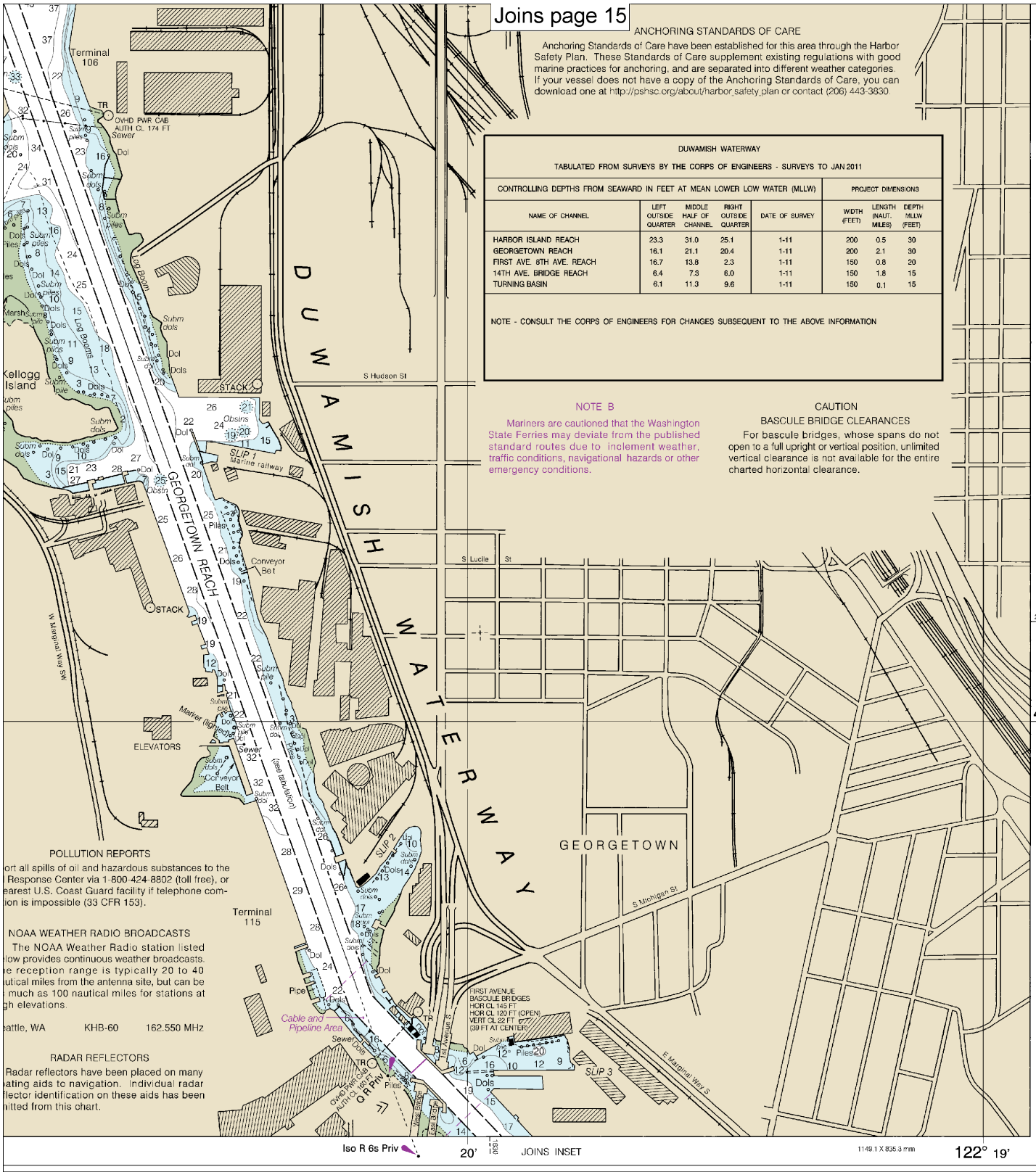
Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS	1	2	3	4
FEET	6	12	18	24
METERS	1 2	3 4	5 6	7 8

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. SCALE 1:10,000 See Note on page 5.
Nautical Miles
0
Yards
200 0 200 400 600 800 1000 1200

Joins page 15



ANCHORING STANDARDS OF CARE

Anchoring Standards of Care have been established for this area through the Harbor Safety Plan. These Standards of Care supplement existing regulations with good marine practices for anchoring, and are separated into different weather categories. If your vessel does not have a copy of the Anchoring Standards of Care, you can download one at http://pshsc.org/about/harbor_safety_plan or contact (206) 443-3830.

DUWAMISH WATERWAY

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JAN 2011

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)			DATE OF SURVEY	PROJECT DIMENSIONS		
	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER		WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
HARBOR ISLAND REACH	23.3	31.0	25.1	1-11	200	0.5	30
GEORGETOWN REACH	16.1	21.1	20.4	1-11	200	2.1	30
FIRST AVE. 6TH AVE. REACH	16.7	13.8	2.3	1-11	150	0.8	20
14TH AVE. BRIDGE REACH	6.4	7.3	6.0	1-11	150	1.8	15
TURNING BASIN	6.1	11.3	9.6	1-11	150	0.1	15

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

NOTE B

Mariners are cautioned that the Washington State Ferries may deviate from the published standard routes due to inclement weather, traffic conditions, navigational hazards or other emergency conditions.

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

POLLUTION REPORTS

ort all spills of oil and hazardous substances to the Response Center via 1-800-424-8802 (toll free), or earest U.S. Coast Guard facility if telephone com- ion is impossible (33 CFR 153).

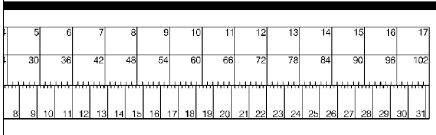
NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed low provides continuous weather broadcasts. he reception range is typically 20 to 40 utical miles from the antenna site, but can be much as 100 nautical miles for stations at gh elevations.

attle, WA KHB-60 162.550 MHz

RADAR REFLECTORS

Radar reflectors have been placed on many ating aids to navigation. Individual radar flector identification on these aids has been itted from this chart.



Elliott Bay and Duwamish Waterway

SOUNDINGS IN FEET - SCALE 1:10,000

18450

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Interactive chart catalog	—	**http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml**
Report a chart discrepancy	—	**http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx**
Chart and chart related inquiries and comments	—	**http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs**
Chart updates (LNM and NM corrections)	—	**http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html**
Coast Pilot online	—	**http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm**
Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
Contact Us	—	**http://www.nauticalcharts.noaa.gov/staff/contact.htm**

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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

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